CLAIMS

1. Method for cladding a simple or complex surface, electrically conducting or semiconducting, by means of an organic film from at least one precursor of said organic film, characterised in that the cladding of the surface by the organic film is carried out by electro-initiated grafting of said, at least one, precursor of said surface by applying at least one potential sweep on this surface carried out in such a way that at any point of said surface the maximum potential of each potential sweep, in absolute value and relative to a reference electrode, is greater than or equal to the value of the potential (V_{bloc}) from which the curves of a graph expressing the quantity of electro-grafted precursor on a surface identical to said surface in function of the number of potential sweeps are all superposed and independent of this V_{bloc} potential.

2. Method according to claim 1, wherein the organic film is an organic polymer film and the precursor is an electro-active monomer precursor of said organic polymer film.

3. Method according to claim 2, wherein the monomer precursor of the organic polymer is a vinylic monomer or a mixture of vinylic monomers.

4. Method according to claim 2, wherein the, at least one, monomer precursor of the organic polymer

being a vinylic monomer, it is chosen from amongst the group constituted of vinylic monomers such as acrylonitrile, methacrylonitrile, methyl methacrylate, ethyl methacrylate, butyl methacrylate, propyl methacrylate, hydroxyethyl methacrylate, hydroxypropyl methacrylate, glycidyl methacrylate, the acrylamides and in particular the amino-ethyl, propyl, butyl, pentyl and hexyl methacrylamides, the cyanoacrylates, di-methacrylate polyethylene glycol, acrylic acid, methacrylic acid, styrene, parachloro-styrene, N-vinyl pyrrolidine, 4-vinyl pyridine, the vinyl halides, acryloyl chloride, methacryloyl chloride, and their derivatives.

5. Method according to claim 2, wherein the electro-initiated polymerisation consists of electro-grafting of cyclic monomers cleavable by nucleophilic or electrophilic attack.

6. Method according to claim 2, wherein the electro-initiated polymerisation consists of electro-grafting of salts of diazonium, sulfonium, phosphonium or iodonium.

7. Method according to claim 2, wherein the electro-initiated polymerisation is initiated by salts of diazonium, sulfonium, phosphonium or iodonium, in the presence of polymerisable monomers by free radical means such as vinylic monomers or cleavable cyclic molecules.

8. Method according to claim 1, wherein the precursor is a vinylic monomer coupled to a molecule or a macromolecule chosen amongst the group constituted of a polymer such as polyethylene glycol; of a nitrogenous base or a derived nitrogenous base; of an oligonucleotide; of a peptide; of a fatty acid; of a glucide; of a polysaccharide, modified or not; of cellulose and its derivatives and of chitosan and its derivatives.

9. Method according to claim 2, wherein N potential sweeps are applied, N being a whole positive number, with $1 \leq N \leq 15$.

10. Method according to claim 2, wherein the potential sweep is a voltammetric or multi-slot sweep

11. Method according to claim 2, in which the precursor monomer being methacrylonitrile, V_{bloc} is -2.3 to -2.5 V (Ag^+/Ag).

12. Cladding obtained by the method according to claim 1.

13. Utilisation of a method according to claim 1, for the organic functioning of a surface.

14. Utilisation of a method according to claim 1, for the manufacture of a biochip or a sensor.

15. Utilisation of a method according to claim 1 for producing an insulating layer or a barrier layer in a micro-system.

16. Utilisation of a method according to claim 1 to produce an insulating layer or a barrier layer for microelectronics.